

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: McGRAW-EDISON

Report Number: P453288

Luminaire Tested: **GALN-SA4B-740-U-T3R**

Issue Date: 1/4/2021

Test Information

Test Method: LM-79-08
Report Number: P453288
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-042-8)
Test Lab: INNOVATION CENTER
Issue Date: 1/4/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GALN-SA4B-740-U-T3R
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(4) 70 CRI, 4000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
ROADWAY OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 23035 lumens
Efficiency: N/A
Efficacy: 140.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Medium
BUG Rating: B3 - U0 - G4

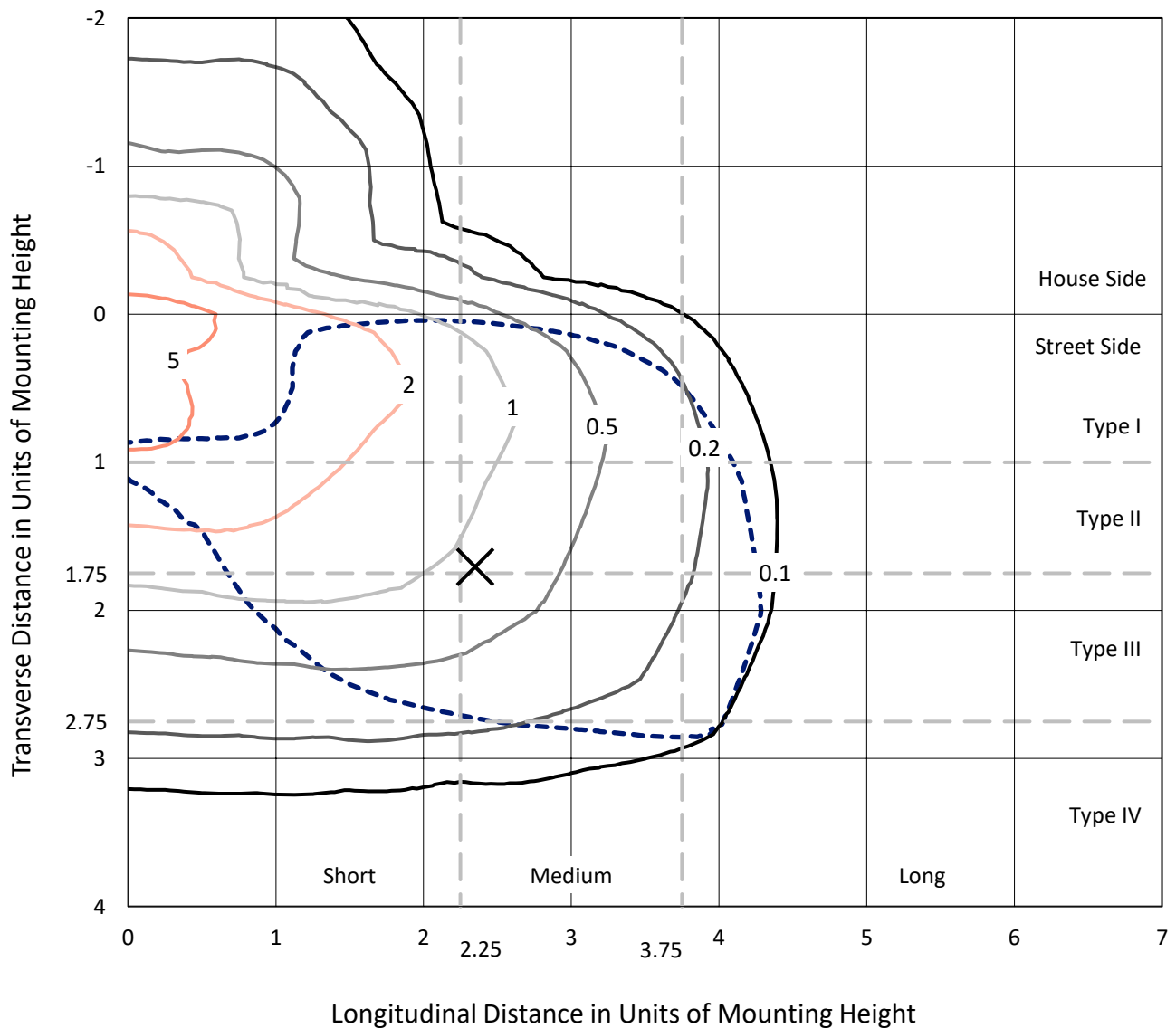
Input Watts (W): 164
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

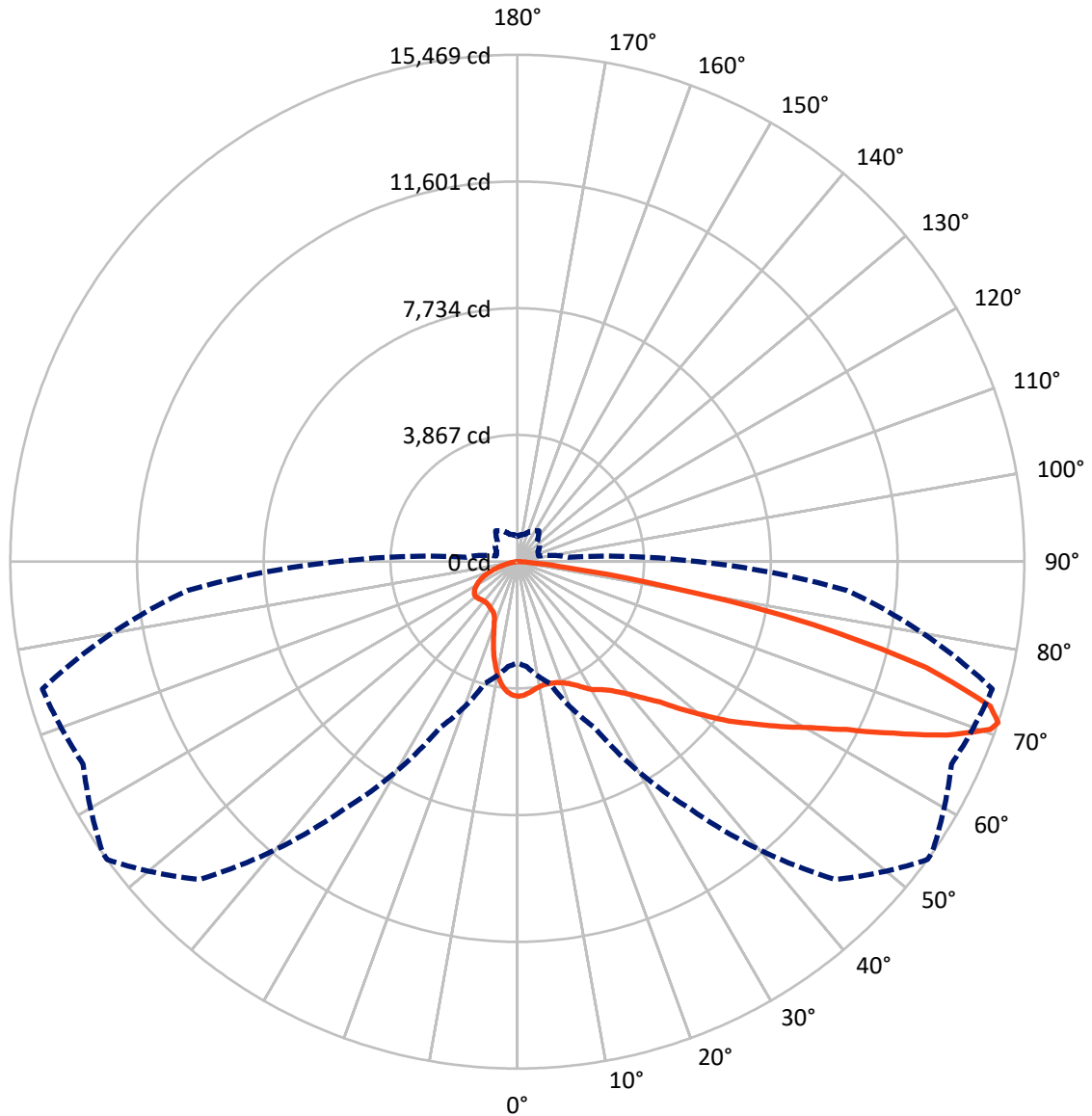
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.6 fc
 Type IV - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 54-Deg Lateral - - - Horizontal Cone Through 71-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 4158.8 | 0.0 | 4158.8 |
| | % Fixture | 18.1 | 0.0 | 18.1 |
| Street Side | Lumens | 18876.2 | 0.0 | 18876.2 |
| | % Fixture | 81.9 | 0.0 | 81.9 |
| Total | Lumens | 23035.0 | 0.0 | 23035.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 366.2 | 1.6 |
| 10°-20° | 967.1 | 4.2 |
| 20°-30° | 1610.2 | 7.0 |
| 30°-40° | 2381.0 | 10.3 |
| 40°-50° | 3353.7 | 14.6 |
| 50°-60° | 4490.7 | 19.5 |
| 60°-70° | 5660.2 | 24.6 |
| 70°-80° | 3865.9 | 16.8 |
| 80°-90° | 340.0 | 1.5 |
| 90°-100° | 0.0 | 0.0 |
| 100°-110° | 0.0 | 0.0 |
| 110°-120° | 0.0 | 0.0 |
| 120°-130° | 0.0 | 0.0 |
| 130°-140° | 0.0 | 0.0 |
| 140°-150° | 0.0 | 0.0 |
| 150°-160° | 0.0 | 0.0 |
| 160°-170° | 0.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 |
| 0°-90° | 23035.0 | 100.0 |
| 0°-180° | 23035.0 | 100.0 |

Coefficient of Utilization



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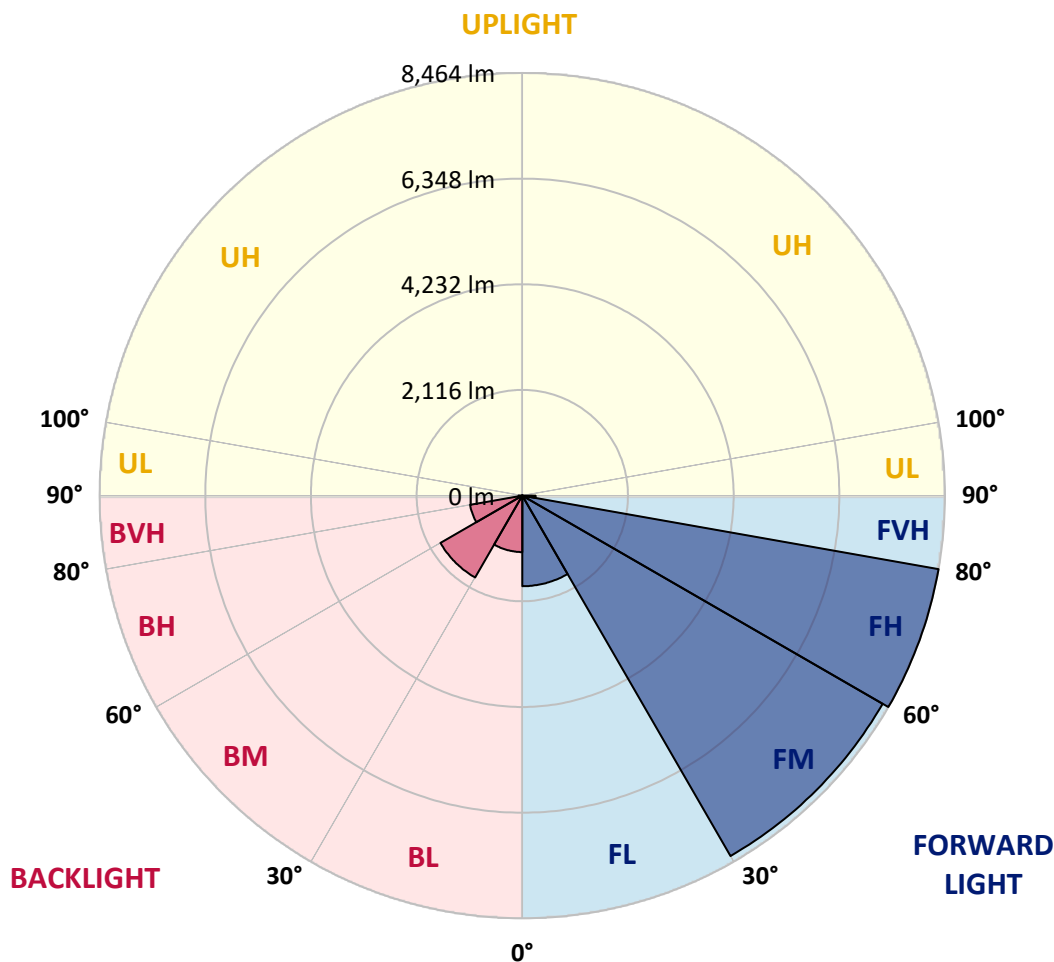
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|----------|
| | | | | B | U | G |
| FL | (0°-30°) | 1813.2 | 7.9 | | | |
| FM | (30°-60°) | 8333.2 | 36.2 | | | |
| FH | (60°-80°) | 8464.0 | 36.7 | | | G4/12000 |
| FVH | (80°-90°) | 265.7 | 1.2 | | | G3/500 |
| BL | (0°-30°) | 1130.3 | 4.9 | B3/2500 | | |
| BM | (30°-60°) | 1892.1 | 8.2 | B2/2500 | | |
| BH | (60°-80°) | 1062.2 | 4.6 | B3/2500 | | G3/2500 |
| BVH | (80°-90°) | 74.2 | 0.3 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G4

Type IV Medium





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 54° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 4109.8 | 4109.8 | 4109.8 | 4109.8 | 4109.8 | 4109.8 | 4109.8 | 4109.8 | 4109.8 | 4109.8 | 4109.8 |
| 2.5° | 3970.4 | 3989.1 | 3994.1 | 4006.5 | 4032.6 | 4053.8 | 4074.9 | 4072.5 | 4102.3 | 4114.8 | 4126.0 |
| 5° | 3793.7 | 3798.7 | 3817.4 | 3842.3 | 3888.3 | 3946.8 | 4004.0 | 4005.3 | 4078.7 | 4137.2 | 4165.8 |
| 7.5° | 3664.3 | 3680.5 | 3693.0 | 3719.1 | 3767.6 | 3831.1 | 3921.9 | 3929.4 | 4060.0 | 4175.7 | 4236.7 |
| 10° | 3579.7 | 3598.4 | 3612.1 | 3644.4 | 3693.0 | 3763.9 | 3862.2 | 3875.9 | 4046.3 | 4236.7 | 4343.7 |
| 12.5° | 3502.6 | 3521.3 | 3533.7 | 3576.0 | 3639.5 | 3726.6 | 3837.3 | 3853.5 | 4051.3 | 4307.6 | 4460.7 |
| 15° | 3549.9 | 3564.8 | 3559.8 | 3572.3 | 3614.6 | 3714.1 | 3847.2 | 3863.4 | 4070.0 | 4376.1 | 4576.4 |
| 17.5° | 3760.1 | 3772.6 | 3731.5 | 3684.2 | 3664.3 | 3737.8 | 3878.4 | 3895.8 | 4107.3 | 4447.0 | 4694.6 |
| 20° | 4070.0 | 4103.6 | 4014.0 | 3908.2 | 3812.4 | 3822.4 | 3943.1 | 3961.7 | 4159.6 | 4517.9 | 4815.3 |
| 22.5° | 4473.1 | 4498.0 | 4388.5 | 4214.3 | 4037.6 | 3946.8 | 4040.1 | 4051.3 | 4237.9 | 4610.0 | 4947.2 |
| 25° | 4947.2 | 4962.1 | 4810.3 | 4586.3 | 4331.3 | 4159.6 | 4173.2 | 4193.2 | 4367.3 | 4714.5 | 5064.1 |
| 27.5° | 5407.5 | 5454.8 | 5279.4 | 5005.7 | 4669.7 | 4383.5 | 4356.1 | 4368.6 | 4507.9 | 4773.0 | 5145.0 |
| 30° | 5953.8 | 5950.0 | 5764.6 | 5447.4 | 5016.8 | 4627.4 | 4529.1 | 4526.6 | 4583.8 | 4801.6 | 5203.5 |
| 32.5° | 6389.3 | 6440.3 | 6258.6 | 5912.7 | 5413.8 | 4880.0 | 4648.5 | 4643.6 | 4642.3 | 4851.4 | 5290.6 |
| 35° | 6884.5 | 6891.9 | 6725.2 | 6376.8 | 5843.0 | 5197.3 | 4815.3 | 4790.4 | 4761.8 | 4958.4 | 5408.8 |
| 37.5° | 7327.4 | 7362.3 | 7209.2 | 6818.5 | 6264.8 | 5527.0 | 5044.2 | 5028.0 | 4940.9 | 5143.8 | 5597.9 |
| 40° | 7673.3 | 7699.5 | 7607.4 | 7235.4 | 6680.4 | 5882.9 | 5335.4 | 5305.5 | 5199.8 | 5447.4 | 5850.5 |
| 42.5° | 7786.6 | 7840.1 | 7876.2 | 7693.2 | 7158.2 | 6304.7 | 5693.7 | 5656.4 | 5575.5 | 5907.7 | 6141.7 |
| 45° | 7795.3 | 7879.9 | 8070.3 | 8079.0 | 7638.5 | 6809.8 | 6111.8 | 6085.7 | 6079.4 | 6497.5 | 6551.0 |
| 47.5° | 7729.3 | 7815.2 | 8135.0 | 8307.9 | 8066.5 | 7320.0 | 6715.3 | 6674.2 | 6677.9 | 7226.7 | 7010.2 |
| 50° | 7570.1 | 7672.1 | 8060.3 | 8454.7 | 8401.2 | 7850.0 | 7352.3 | 7338.6 | 7415.8 | 8059.1 | 7486.7 |
| 52.5° | 7270.2 | 7393.4 | 7983.2 | 8546.8 | 8650.1 | 8306.7 | 8076.5 | 8037.9 | 8233.3 | 8962.4 | 8008.0 |
| 55° | 6440.3 | 6625.7 | 7700.7 | 8597.8 | 8886.5 | 8743.4 | 8728.5 | 8798.2 | 9057.0 | 9947.8 | 8581.6 |
| 57.5° | 6007.3 | 6146.6 | 7087.3 | 8606.5 | 9185.1 | 9251.1 | 9490.0 | 9507.4 | 9960.3 | 10994.3 | 9229.9 |
| 60° | 5770.9 | 5894.1 | 6751.3 | 8549.3 | 9601.9 | 9879.4 | 10268.9 | 10331.1 | 10842.5 | 12127.8 | 9901.8 |
| 62.5° | 5564.3 | 5670.1 | 6549.8 | 8351.5 | 10072.3 | 10811.4 | 11278.0 | 11307.8 | 11844.1 | 13379.5 | 10565.0 |
| 65° | 5077.8 | 5198.5 | 6144.1 | 8153.6 | 10477.9 | 11976.0 | 12616.8 | 12581.9 | 12910.4 | 14459.5 | 10980.6 |
| 67.5° | 4422.1 | 4575.1 | 5386.4 | 7470.5 | 10678.2 | 13248.9 | 14124.8 | 14081.3 | 13963.1 | 15167.5 | 11100.0 |
| 70° | 3584.7 | 3666.8 | 4417.1 | 6289.7 | 9878.2 | 13917.0 | 15315.6 | 15269.5 | 14615.1 | 15260.8 | 10535.1 |
| 71° | 3084.5 | 3212.7 | 3846.0 | 5586.7 | 9212.5 | 13713.0 | 15468.6 | 15456.2 | 14616.3 | 15003.3 | 10109.6 |
| 72.5° | 2407.6 | 2486.0 | 3045.9 | 4328.8 | 7830.1 | 12553.3 | 15090.4 | 15137.6 | 14299.0 | 14287.8 | 9232.4 |
| 75° | 1523.0 | 1557.8 | 1911.2 | 2548.2 | 4296.4 | 8890.2 | 12881.8 | 13010.0 | 12696.4 | 11694.8 | 6865.8 |
| 77.5° | 884.7 | 929.5 | 1144.7 | 1501.8 | 1856.4 | 4825.2 | 9217.5 | 9356.8 | 8821.8 | 6439.0 | 2810.8 |
| 80° | 515.1 | 564.9 | 754.0 | 872.2 | 852.3 | 1790.5 | 4693.3 | 4931.0 | 3819.9 | 1626.2 | 788.9 |
| 82.5° | 286.2 | 319.8 | 530.1 | 531.3 | 454.2 | 584.8 | 1476.9 | 1545.4 | 1090.0 | 655.7 | 322.3 |
| 85° | 207.8 | 235.2 | 342.2 | 309.8 | 217.7 | 251.3 | 513.9 | 538.8 | 440.5 | 276.2 | 104.5 |
| 87.5° | 73.4 | 104.5 | 187.9 | 149.3 | 59.7 | 52.3 | 148.1 | 120.7 | 112.0 | 77.1 | 23.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



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CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 4109.8 | 4109.8 | 4109.8 | 4109.8 | 4109.8 | 4109.8 | 4109.8 | 4109.8 | 4109.8 | 4109.8 | 4109.8 |
| 2.5° | 4132.2 | 4134.7 | 4122.2 | 4099.8 | 4077.4 | 4048.8 | 4016.5 | 3991.6 | 3980.4 | 3979.1 | 3977.9 |
| 5° | 4177.0 | 4183.2 | 4135.9 | 4066.2 | 3989.1 | 3894.5 | 3813.7 | 3721.6 | 3697.9 | 3660.6 | 3671.8 |
| 7.5° | 4249.1 | 4245.4 | 4152.1 | 4004.0 | 3823.6 | 3623.3 | 3454.1 | 3355.8 | 3253.7 | 3225.1 | 3226.4 |
| 10° | 4352.4 | 4328.8 | 4152.1 | 3877.1 | 3576.0 | 3278.6 | 3042.2 | 2892.9 | 2812.0 | 2744.8 | 2719.9 |
| 12.5° | 4461.9 | 4402.2 | 4112.3 | 3699.2 | 3257.5 | 2892.9 | 2639.1 | 2437.5 | 2385.2 | 2330.5 | 2331.7 |
| 15° | 4566.4 | 4466.9 | 4033.9 | 3449.1 | 2914.1 | 2481.1 | 2234.7 | 2114.0 | 2097.8 | 2104.0 | 2102.8 |
| 17.5° | 4661.0 | 4512.9 | 3914.4 | 3170.4 | 2513.4 | 2127.7 | 1997.0 | 2005.7 | 2049.3 | 2080.4 | 2084.1 |
| 20° | 4756.8 | 4540.3 | 3736.5 | 2797.1 | 2135.1 | 1913.7 | 1918.6 | 1987.1 | 2053.0 | 2095.3 | 2101.6 |
| 22.5° | 4847.6 | 4552.7 | 3527.5 | 2436.3 | 1861.4 | 1822.8 | 1896.2 | 1969.7 | 2034.4 | 2075.4 | 2081.6 |
| 25° | 4907.4 | 4524.1 | 3231.3 | 2059.2 | 1727.0 | 1790.5 | 1867.6 | 1929.8 | 1984.6 | 2026.9 | 2036.9 |
| 27.5° | 4923.5 | 4432.0 | 2864.3 | 1754.4 | 1664.8 | 1759.4 | 1830.3 | 1876.3 | 1918.6 | 1958.5 | 1965.9 |
| 30° | 4914.8 | 4296.4 | 2461.1 | 1575.2 | 1628.7 | 1723.3 | 1778.0 | 1811.6 | 1862.7 | 1893.8 | 1900.0 |
| 32.5° | 4901.1 | 4138.4 | 2040.6 | 1479.4 | 1598.9 | 1689.7 | 1722.1 | 1751.9 | 1750.7 | 1738.2 | 1746.9 |
| 35° | 4906.1 | 3949.3 | 1699.7 | 1422.2 | 1572.7 | 1664.8 | 1692.2 | 1654.9 | 1547.9 | 1542.9 | 1537.9 |
| 37.5° | 4932.2 | 3762.6 | 1452.0 | 1382.4 | 1559.1 | 1661.1 | 1676.0 | 1504.3 | 1409.7 | 1366.2 | 1355.0 |
| 40° | 4999.4 | 3544.9 | 1289.1 | 1352.5 | 1557.8 | 1689.7 | 1602.6 | 1428.4 | 1246.7 | 1162.1 | 1155.9 |
| 42.5° | 5089.0 | 3330.9 | 1189.5 | 1333.8 | 1572.7 | 1733.3 | 1572.7 | 1321.4 | 1123.6 | 1073.8 | 1066.3 |
| 45° | 5222.2 | 3085.8 | 1134.8 | 1325.1 | 1595.1 | 1749.4 | 1562.8 | 1243.0 | 1073.8 | 1034.0 | 1034.0 |
| 47.5° | 5372.7 | 2851.8 | 1104.9 | 1318.9 | 1623.8 | 1738.2 | 1474.4 | 1218.1 | 1050.2 | 1055.1 | 1078.8 |
| 50° | 5522.0 | 2649.0 | 1082.5 | 1305.2 | 1648.6 | 1732.0 | 1438.4 | 1216.9 | 1056.4 | 1119.8 | 1162.1 |
| 52.5° | 5695.0 | 2505.9 | 1055.1 | 1282.8 | 1648.6 | 1692.2 | 1427.2 | 1241.8 | 1073.8 | 1092.5 | 1111.1 |
| 55° | 5904.0 | 2461.1 | 1020.3 | 1234.3 | 1618.8 | 1592.7 | 1420.9 | 1277.9 | 1086.2 | 1042.7 | 1050.2 |
| 57.5° | 6180.2 | 2533.3 | 986.7 | 1173.3 | 1550.3 | 1489.4 | 1418.5 | 1287.8 | 1057.6 | 1021.5 | 1014.1 |
| 60° | 6501.2 | 2676.4 | 976.7 | 1111.1 | 1457.0 | 1401.0 | 1403.5 | 1259.2 | 1017.8 | 980.5 | 986.7 |
| 62.5° | 6726.5 | 2762.3 | 970.5 | 1063.8 | 1355.0 | 1304.0 | 1367.4 | 1224.4 | 1000.4 | 968.0 | 974.3 |
| 65° | 6726.5 | 2657.7 | 913.3 | 991.7 | 1223.1 | 1187.0 | 1323.9 | 1180.8 | 978.0 | 940.7 | 934.4 |
| 67.5° | 6471.4 | 2352.9 | 826.2 | 883.4 | 1077.5 | 1053.9 | 1262.9 | 1128.5 | 944.4 | 915.8 | 900.8 |
| 70° | 5807.0 | 1784.3 | 716.7 | 756.5 | 893.4 | 914.5 | 1184.5 | 1057.6 | 888.4 | 853.6 | 831.2 |
| 71° | 5514.6 | 1554.1 | 670.7 | 691.8 | 822.5 | 853.6 | 1147.2 | 1027.8 | 863.5 | 813.7 | 773.9 |
| 72.5° | 4950.9 | 1309.0 | 601.0 | 609.7 | 703.0 | 759.0 | 1068.8 | 970.5 | 816.2 | 745.3 | 700.5 |
| 75° | 3761.4 | 955.6 | 484.0 | 479.0 | 520.1 | 602.2 | 904.6 | 864.8 | 715.4 | 619.6 | 593.5 |
| 77.5° | 1625.0 | 520.1 | 362.1 | 365.8 | 353.4 | 456.6 | 711.7 | 742.8 | 613.4 | 503.9 | 480.3 |
| 80° | 492.7 | 299.9 | 247.6 | 252.6 | 236.4 | 306.1 | 501.4 | 582.3 | 492.7 | 391.9 | 359.6 |
| 82.5° | 252.6 | 179.2 | 169.2 | 166.7 | 150.6 | 173.0 | 303.6 | 398.2 | 352.1 | 245.1 | 216.5 |
| 85° | 109.5 | 95.8 | 83.4 | 80.9 | 70.9 | 62.2 | 108.3 | 199.1 | 186.6 | 136.9 | 130.6 |
| 87.5° | 27.4 | 24.9 | 16.2 | 14.9 | 8.7 | 1.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)